PRC Environmental Management Inc
233 North Michigan Avenue
Suite 1621
Chicago IL 60601
312 856 8700
Fax 312 938 0118

PRC

PRELIMINARY ASSESSMENT/ VISUAL SITE INSPECTION

JOHNSON FIRE PROOF DOOR CO , INC (FORMERLY FANSTEEL, INC , VR WESSON DIVISION) LAKE BLUFF, ILLINOIS ILD 010 224 335

FINAL REPORT

Prepared for

U S ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460

Work Assignment No	C05087
EPA Region	5
Site No	ILD 010 224 335
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PRC No	009 C05087IL7H
Prepared by	Resource Applications Inc (Laura Czajkowski)
Contractor Project Manager	Shin Ahn
Telephone No	(312) 856 8700
EPA Work Assignment Manager	Kevin Pierard
Telephone No	(312) 886-4448

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EXECUTIVE SUMMARY

Resource Applications, Inc. (RAI) performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Johnson Fire Proof Door Co., Inc. (Johnson) facility in Lake Bluff, Lake County, Illinois. This summary highlights the results of the PA/VSI and the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified. In addition, a completed U.S. Environmental Protection Agency (EPA) Preliminary Assessment Form (EPA Form 2070-12) is included in Attachment A to assist in prioritizing RCRA facilities for corrective action.

The Johnson facility manufactures hollow, metal and stainless steel security doors and frames. The facility generates and manages waste paint (D001) and paint booth filters (D001). The facility has operated at its current location since 1987. The facility occupies 8 acres in a mixed-use industrial and commercial area and employs about 110 people. The facility's current regulatory status is that of a small-quantity generator of hazardous waste, storing wastes for less than 180 days. Fansteel, Inc., VR Wesson Division (Fansteel) operated at the facility from 1974 to 1986 and was regulated as a small-quantity generator of hazardous waste, storing the waste for greater than 90 days. Fansteel generated spent acetone (D001, F003) from the manufacture of carbide powder. Fansteel RCRA-closed the Former Acetone Storage Area (SWMU 1) and the Former Acetone Aboveground Storage Tank (AST) (SWMU 2) in 1986. IEPA approved closure on December 18, 1986, and Fansteel's RCRA Hazardous Waste Part A permit application was withdrawn. Fansteel shut down its operations in 1986 and sold the facility and property in 1987.

Mr. Norman Johnson purchased the facility and 8 additional acres of land. Another 20 acres that were part of the Fansteel site were purchased by William Knauz from Fansteel. No known waste management activities from Fansteel's operations took place on this 20-acre portion of the Fansteel site. The land purchased by William Knauz remains undeveloped.

The PA/VSI identified the following three SWMUs and one AOC at the facility:

Solid Waste Management Units

1. Former Acetone Storage Area
2. Former Acetone AST
3. Outdoor Storage Area

Area of Concern

1. Underground Storage Tank (UST)

The potential for release to environmental media is low for SWMUs 1 and 2. SWMUs 1 and 2 managed waste indoors, on 8-inch-thick concrete. No releases from these units have been documented.

There is a low potential for release to ground water, surface water, and air for SWMU 3. There is a moderate potential for release to on-site soils. The Johnson facility currently uses SWMU 3 to manage waste paint (D001) and paint booth filters (D001) in 55-gallon drums, outdoors, on a 4-inch-thick concrete pad. There is a stormwater drain located 200 feet north of the unit. The area is not bermed, and any releases could migrate to on-site soils.

There is a moderate potential for release to ground water and on-site soils for AOC 1. Fansteel representatives had no known or documented information concerning the UST. It is not known what the UST stored. The release potential to air and surface water is low, since the UST is below grade.

The Johnson facility is made up of one building with an area of 85,000 square feet. The building is situated on a 8-acre parcel of land at 415 Skokie Highway, Lake Bluff, Illinois. Lake Bluff has population of about 3,400 people. The facility is bordered on the north by businesses; on the west by Skokie Highway; on the south by a field, a pond, and Skokie Highway; and on the east by railroad tracks. The nearest residential area is located 0.6 mile northwest of the facility. The nearest school, Forest Bluff Elementary School, is located 1 mile west of the facility. The facility has locked entrances and all visitors are required to check in at the south entrance. An 8-foot-high fence protects outdoor storage area.

The nearest surface water body, an unnamed pond, is located about 900 feet south of the Johnson facility, and is used for stormwater drainage purposes Ground water is used as an industrial and drinking water source The nearest private residence drinking water well is located at 2 Eva Terrace, 0 5 mile west and upgradient of the facility The nearest industrial well is located at 300 Rockland Road, 0 7 mile west of the facility Most of the Village of Lake Bluff receives its drinking water from Lake Michigan The nearest sensitive environment, the unnamed pond, is a wetland classified as palustrine open water, intermittently exposed, and excavated, located 900 feet south of the Johnson facility on the undeveloped 20-acre portion of land formerly owned by Fansteel

RAI recommends that waste paint (D001) managed at SWMU 3 be placed within the fenced area and also that the concrete pad be bermed RAI also recommends confirming the presence of the UST (AOC 1) and sampling the contents if the UST contains any material, conducting a tightness test on the UST, and then, depending on the results of the tightness test possibly following up with soil sampling RAI also recommends removal and closure of the UST RAI recommends no further action at this time for SWMUs 1 and 2

1 0 INTRODUCTION

PRC Environmental Management, Inc (PRC) received Work Assignment No C05087 from the U S Environmental Protection Agency (EPA) under Contract No 68 W9 0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5 Resource Applications, Inc (RAI), TES 9 team member provided the necessary assistance to complete the PA/VSI activities for the Johnson Fire Proof Door Co Inc (Johnson) facility

As part of the EPA Region 5 Environmental Priorities Initiative the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities The PA/VSI is the first step in the process of prioritizing facilities for corrective action Through the PA/VSI process enough information is obtained to characterize a facility s actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC)

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste

The SWMU definition includes the following

- RCRA-regulated units such as container storage areas tanks surface impoundments, waste piles land treatment units, landfills incinerators and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has usually exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents Such areas might include a wood preservative drippage area a loading or unloading area, or an area where solvent used to wash large parts has continually dripped onto soils

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis This includes any area a where strong possibility exists that such a release might occur in the future

The purpose of the PA is as follows

- Identify SWMUs and AOCs at the facility
- Obtain information on the operational history of the facility
- Obtain information on releases from any units at the facility
- Identify data gaps and other informational needs to be filled during the VSI

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago

The purpose of the VSI is as follows

- Identify SWMUs and AOCs not discovered during the PA
- Identify releases not discovered during the PA
- Provide a specific description of the environmental setting
- Provide information on release pathways and the potential for releases to each environmental medium
- Confirm information obtained during the PA regarding operations, SWMUs AOCs, and releases

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all visible SWMUs identifying evidence of releases making a preliminary selection of potential sampling parameters and locations, if needed and obtaining additional information necessary to complete the PA/VSI report

This report documents the results of a PA/VSI of the Johnson facility (EPA Identification No ILD 010 224 335) in Lake Bluff Lake County, Illinois Fansteel Inc VR Wesson Division (Fansteel) operated at the site prior to Johnson The PA was completed on October 21 1992 RAI gathered and reviewed information from the Illinois Environmental Protection Agency (IEPA) and from EPA Region 5 RCRA files The VSI was conducted on October 22 1992 It included interviews with facility representatives and a walk-through inspection of the facility RAI identified three SWMUs and one AOC at the facility RAI also reviewed relevant publications from the Federal Emergency Management Agency (FEMA), National Oceanic and Atmospheric Administration (NOAA), U S Department of Commerce (USDC), U S Department of Interior (USDI) U S Geological Survey (USGS), and U S Department of Agriculture (USDA)

RAI completed EPA Form 2070 12 using information gathered during the PA/VSI This form is included as Attachment A The VSI is summarized and seven inspection photographs are included in Attachment B Field notes from the VSI are included in Attachment C

2 0 FACILITY DESCRIPTION

This section describes the facility s location, past and present operations waste generating processes and waste management practices, a history of documented releases regulatory history environmental setting and receptors

2 1 FACILITY LOCATION

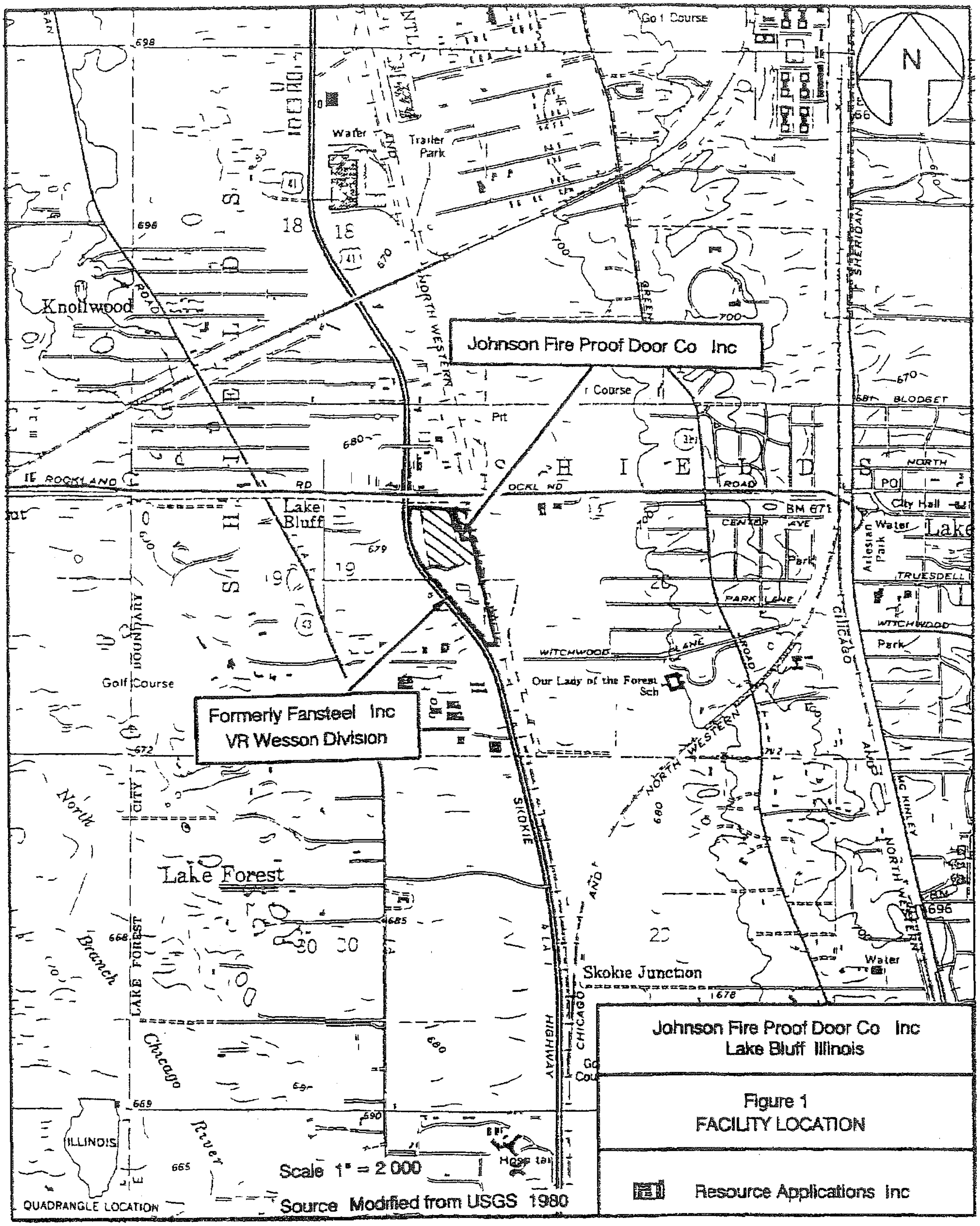
The Johnson facility, located at 415 Skokie Highway, is in Lake Bluff Lake County Illinois (latitude 42°15'36" N and longitude 87°52'30" W) (Fansteel, 1980) The facility occupies 8 acres in a mixed use, industrial, and commercial area The facility location and its relationship to surrounding topographic features is shown in Figure 1

The Johnson facility is bordered on the north by businesses, on the west by the Skokie Highway, on the south by a field, a pond, and the Skokie Highway and on the east by railroad tracks

2 2 FACILITY OPERATIONS

The Johnson facility manufactures hollow metal security and stainless steel doors and frames Johnson receives steel sheets and cuts them to size The steel sheets are then soldered and stamped on both sides The doors are then conveyed by hooks to the spray paint booth where they are spray painted with a zinc oxide based paint When the doors are dry, hardware is attached and the doors are stacked for shipment Scrap steel is collected in 10-cubic yard steel dumpsters and sold to Tramolta of Itasca, Illinois, for recycling

Johnson has operated at the facility since 1987 and employs about 110 people One 85 000 square foot main building houses all of Johnson s operations and offices Offices are located on the south side of the main building Parking lots are located to the south and west side of the main building Solid wastes generated from facility operations and the SWMUs where they are managed are discussed in detail in Section 2 3


N
Johnson Fire Proof Door Co Inc
Formerly Fansteel Inc
VR Wesson Division
Knollwood
Lake Bluff
Lake Forest
Trailer Park
Our Lady of the Forest Sch
Skokie Junction
Golf Course
ROCKLAND RD
BLODGET
CENTER AVE
PARK LANE
WITCHWOOD
TRUESDELL
SHERIDAN
SKOKIE HIGHWAY
CHICAGO AND NORTH WESTERN
North Branch Chicago River
City Hall
ILLINOIS
QUADRANGLE LOCATION
Scale 1" = 2 000
Source Modified from USGS 1980
Johnson Fire Proof Door Co Inc
Lake Bluff Illinois
Figure 1
FACILITY LOCATION
Resource Applications Inc

Fansteel operated the site from 1974 to 1986 Fansteel produced varying grades of carbide powder which was then sold to companies which manufactured cutting tools and metal working parts Spent acetone (D001 F003) was generated from cleaning tools Fansteel operated as a warehouse during the 1980s because of reduced operations In 1987, Mr Norman Johnson purchased the facility and 8 additional acres of land Mr William Knauz purchased the remaining 20 acres of land (this land remains undeveloped) No known waste management activities from Fansteel s operations took place on this 20-acre portion of the Fansteel site Fansteel representatives had neither knowledge nor documentation regarding facility land usage prior to 1974 (Fansteel 1992)

Fansteel operated a distillation system to recover acetone Fansteel representatives had neither knowledge nor documentation regarding the distillation system Fansteel discontinued using the distillation system prior to 1982 In a September 16, 1982 inspection report an IEPA inspector noted that Fansteel began using a 700 gallon aboveground storage tank (AST) the Former Acetone AST (SWMU 2), to store spent acetone for greater than 90 days (IEPA 1982a) The AST was formerly part of the distillation system

2 3 WASTE GENERATION AND MANAGEMENT

Wastes are generated and managed at various locations throughout the facility SWMUs and their current status are identified in Table 1 The locations of SWMUs and the AOC in relation to the facility layout are shown in Figure 2 Present wastes generated by Johnson and past wastes generated by Fansteel at the facility are summarized in Table 2 SWMUs are discussed in detail in Section 3 0 Facility generation and management of both hazardous and nonhazardous wastes are discussed below

The primary waste streams currently generated at the facility are waste paint (D001) and paint booth filters (D001), generated from the paint booth during normal manufacturing processes Excess paint from the paint spraying operation is placed in a 55 gallon steel drum and managed at the Outdoor Storage Area (SWMU 3) About 940 gallons of waste paint (D001) is generated annually Scout Transportation Company of Tulsa, Oklahoma, transports this waste to Chief Supply Corporation of Hoskell, Oklahoma, for treatment

TABLE 1

SOLID WASTE MANAGEMENT UNITS

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit[a]	Status
1	Former Acetone Storage Area	Yes	Inactive RCRA closed in 1986
2	Former Acetone AST	Yes	Removed RCRA closed in 1986
3	Outdoor Storage Area	No	Active less than 180-day storage of hazardous wastes

Note

[a] A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application

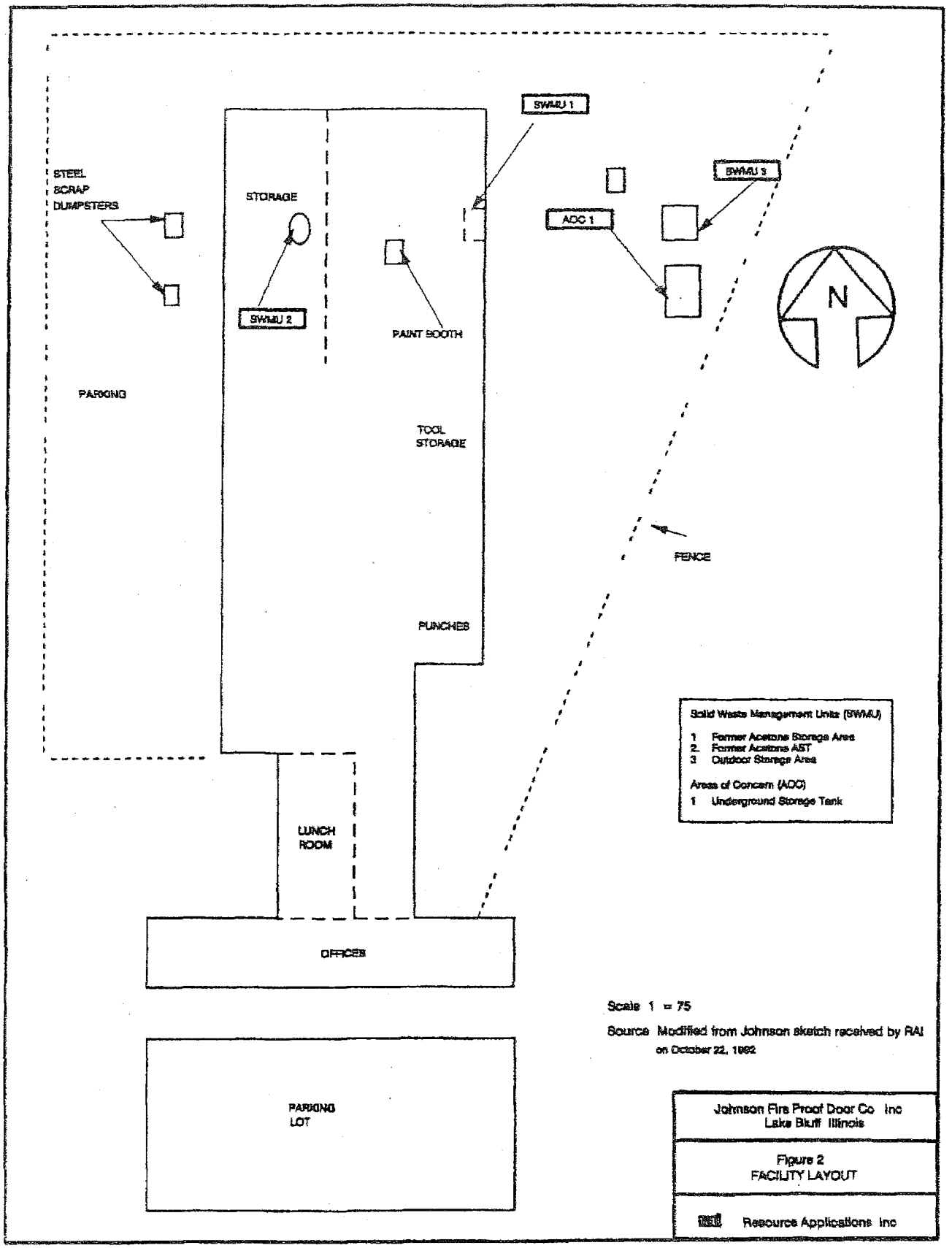

SWMU 1
STEEL
SCRAP
DUMPSTERS
STORAGE
SWMU 3
AOC 1
N
SWMU 2
PAINT BOOTH
PARKING
TOOL
STORAGE
FENCE
PUNCHES
Solid Waste Management Units (SWMU)
1 Former Acetone Storage Area
2 Former Acetone AST
3 Outdoor Storage Area
Areas of Concern (AOC)
1 Underground Storage Tank
LUNCH
ROOM
OFFICES
Scale 1 = 75
Source Modified from Johnson sketch received by RAI
on October 22, 1992
PARKING
LOT
Johnson Fire Proof Door Co Inc
Lake Bluff Illinois
Figure 2
FACILITY LAYOUT
Resource Applications Inc

TABLE 2

SOLID WASTES

Waste/EPA Waste Code	Source	Solid Waste Management Unit
Waste paint/D001	Painting operations	3
Paint booth filters/D001	Painting operations	3
Spent acetone/D001 F003[a]	Cleaning operations	1 and 2

Notes

[a] Waste is no longer generated

The paint booth filters are replaced every 2 to 3 weeks The paint booth filters (D001) are placed in a 55-gallon drum with waste paint (D001) and are included in the 940 gallons of waste paint which is generated annually This waste is managed at SWMU 3 and is also transported by Scout Transportation Company to Chief Supply Corporation of Hoskell Oklahoma

In the past Fansteel generated spent acetone (D001, F003) from cleaning tools The spent acetone (D001, F003) was managed in 55 gallon drums at the Former Acetone Storage Area (SWMU 1) Spent acetone was also managed in the Former Acetone AST (SWMU 2) About 3 000 gallons of this waste was generated annually Hydrite Chemical Company transported this waste to its facility in Milwaukee, Wisconsin for disposal

2 4 HISTORY OF DOCUMENTED RELEASES

No known releases from this facility have been documented

2 5 REGULATORY HISTORY

Fansteel's Notification of Hazardous Waste Activity form was not found in IEPA or EPA files Fansteel submitted a RCRA Hazardous Waste Part A permit application on November 12 1980 (Fansteel, 1980) This application listed one storage container (S01) (SWMU 1) and one other (T04) unit SWMU 1 was listed with a capacity of 5,500 gallons and SWMU 2 was listed with a 72 000 gallons per-day capacity The T04 unit was an acetone distillation system that included a 700 gallon AST (SWMU 2) that was later used to store spent acetone (D001, F003) F003 was the only listed waste on the application

Fansteel was regulated as an Interim Status Standards (ISS) storage facility storing hazardous wastes for greater than 90 days IEPA approved the May 21 1986 closure plan for SWMUs 1 and 2 on August 11, 1986 (IEPA, 1986a) SWMUs 1 and 2 were RCRA closed with IEPA approval and Fansteel s RCRA Hazardous Waste Part A permit application was withdrawn on December 18 1986 (IEPA 1986b) Fansteel then shut down operations and sold the facility

Johnson submitted a Notification of Regulated Waste Activity form to EPA on November 25 1991 (Johnson, 1991) This application listed D001 and F003 hazardous wastes A Johnson facility representative stated during the VSI that a F003 waste was never generated from their operations However, the facility has not submitted a revised Notification of Regulated Waste Activity form Johnson is regulated as a small quantity generator storing hazardous waste for less than 180 days

IEPA conducted an Interim Status Standards inspection at Fansteel on September 16, 1982 (IEPA 1982a) The IEPA inspector noted during the inspection that the contingency plan lacked a list of emergency equipment (IEPA, 1982b) Fansteel responded by adding an emergency equipment list and sending it to IEPA on October 11, 1982 (Fansteel -1982) No letter from IEPA stating that the violation was resolved was in IEPA or EPA s files

IEPA sent a Compliance Inquiry Letter to Fansteel on April 17, 1984 because Fansteel had failed to submit a 1983 Facility Annual Hazardous Waste Report to IEPA (IEPA, 1984) Fansteel sent the Facility Annual Hazardous Waste Report on April 24, 1984 (Fansteel, 1984) However within IEPA or EPA files no letter from IEPA stating that the violation was resolved was found

Fansteel was sent another Compliance Inquiry Letter on May 19 1987 for failing to submit a 1986 Facility Annual Hazardous Waste Report (IEPA, 1987a) Fansteel was sent an In Compliance Letter on June 10, 1987 stating IEPA had received Fansteel's June 1 1987 response and resolved the violation regarding the 1986 Facility Annual Hazardous Waste Report The In Compliance Letter also stated that Fansteel had failed to submit a Generator Annual Hazardous Waste Report (IEPA 1987b) No letter from IEPA stating that the violation for failing to submit a Generator Annual Hazardous Waste Report was resolved was found in IEPA or EPA files

The facility is not required to have operating air permits The facility has no history of odor complaints from area residents The facility does not have a National Pollutant Discharge Elimination System (NPDES) permit

Johnson does not use any underground storage tanks (UST) at the facility However, during the VSI vent piping from a UST was observed on the east side of the facility The Johnson facility

representative stated it has been there since Johnson bought the facility in 1987 The construction capacity and use of the UST is not known

No CERCLA activity has been performed at this site

2 6 ENVIRONMENTAL SETTING

This section describes the climate, flood plain and surface water geology and soils and ground water in the vicinity of the facility

2 6 1 Climate

The climate in Lake County is continental characterized by frequent changes in temperature humidity cloudiness and wind direction The average daily temperature is 51 4 degrees Fahrenheit (°F) The lowest average daily temperature is 31 3 °F in February The highest average daily temperature is 71 9°F in August (NOAA, 1990)

The total annual precipitation for the county is 43 12 inches (NOAA 1990) The mean annual lake evaporation for the area is about 30 inches (USDC, 1968) The 1 year, 24 hour maximum rainfall is about 2 2 inches (USDC, 1963)

The prevailing wind is from the south Average wind speed is highest in February at 14 miles per hour (NOAA, 1990)

2 6 2 Floodplain and Surface Water

The Johnson facility is located outside the 500 year floodplain (FEMA 1981)

The nearest surface water body, an unnamed pond, is located on the 20 acre portion of undeveloped land that was formerly part of the Fansteel site, about 900 feet south of the Johnson facility The pond is used for stormwater drainage purposes

On the northern side of the facility, surface water runoff flows to the northeast to stormwater drains located 100 feet to the north of the facility The stormwater drains discharge into the Skokie Drainage Ditch which discharges into the north branch of the Chicago River On the southern side of the facility surface water runoff flows to the west and then south to an unnamed pond located 900 feet south of the facility

Other surface water bodies in the area include Lake Michigan located 2 miles east of the facility The north branch of the Chicago River is located 1 2 miles southwest of the facility

2 6 3 Geology and Soils

The facility is almost entirely underlain by Made land which consists of areas where cutting filling, and grading associated with construction activities have resulted in obscuring the original nature of the soils Less altered areas of the facility are underlain by Ashkum silty clay loam The surface layer is black silty clay loam about 12 inches thick The subsoil is about 38 inches thick and consists predominantly of dark grayish brown firm silty clay loam becoming yellowish brown and calcareous in the lower part The underlying material is mixed grayish brown and yellowish brown compact very firm, calcareous silty clay loam Permeability is moderately slow (0 2 to 0 6 inch per hour), available moisture capacity is high (0 15 to 0 2 inch of water per inch of soil) and organic matter content is high (USDA, 1970)

No site specific geologic information was available, thus regional information is presented here In the vicinity of the site, the uppermost unconsolidated deposits, or drift consist of Pleistocene gray clayey and silty clayey till of the Blodgett Moraine This unit is part of the Lake Border Moraimic System, which is in turn a division of the Wadsworth Member of the Wedron Formation These moraines are relatively low in pebble and cobble content and are commonly mantled by 1 to 2 feet of windblown silt known as loess (Willman and Lineback 1970) Approximately 200 feet of drift overlies the uppermost consolidated bedrock unit which is a dolomite of Silurian age In the Lake Bluff area, this dolomite ranges in composition from extremely argillaceous, silty and cherty to exceptionally pure, and in the vicinity of the site is approximately 200 feet thick The Silurian dolomite is underlain by approximately 150 feet of Ordovician Maquoketa gray-brown shale with interbedded dolomite or limestone, 300 feet of Galena Platteville dolomite and

limestone, and 150 feet of Glenwood-St Peter sandstone The Prairie du Chien Trempealeau and Franconia Formations straddling the Cambrian Ordovician boundary, consist of dolomites with varying proportions of sandstone and shale, and total about 300 feet in thickness The underlying Cambrian deposits are the Ironton-Galesville sandstone, the Eau Claire shale and siltstone and the Mt Simon sandstone, underlain by Precambrian crystalline rocks (Willman 1971 Suter et al 1959)

2 6 4 Ground Water

No site-specific ground water information was available thus, regional information is presented here Ground water is obtained from four major aquifer systems in northeastern Illinois the glacial drift system, the shallow bedrock system and two deep bedrock systems They are distinguished by their hydrologic properties and recharge source areas (Hughes et al 1966) In northeastern Lake County, possibilities are fair to good for the occurrence of water bearing sand and gravel within the glacial drift although supplies are localized and yield only farm or domestic supplies Typical well depths are 35 to 100 feet (Bergstrom, et al 1955) The shallow bedrock aquifer system in the site vicinity underlies the glacial drift system and is comprised of the Silurian dolomite formations and underlying upper Ordovician shales Water from this aquifer is obtained from fractures and solution openings in the Silurian dolomite beds (Hughes et al 1966) Recharge is attained by percolation of local precipitation through the overlying glacial drift (Hughes et al 1966)

The deep bedrock aquifer systems include the Cambrian Ordovician aquifer system and the Mt Simon aquifer system The former comprises the Glenwood and St Peter Formations of the middle Ordovician series and the Ironton and Galesville Sandstone formations of the late Cambrian The top of the Cambrian-Ordovician aquifer is at the top of or within the middle Ordovician Galena Platteville dolomite, the bottom of the system is located in the impermeable shales and dolomites of the upper and middle parts of the Cambrian Eau Claire Formation This aquifer system spans a thickness of approximately 500 feet (Hughes, et al , 1966)

Within the Cambrian Ordovician aquifer system, the Glenwood St Peter Sandstone unit is widely utilized as an aquifer where water requirements are less than 200 gallons per minute (gpm) This unit has a permeability of approximately 15 gallons per day per square foot (gpd/sq ft) The

Ironton Galesville Sandstone unit is the major producing unit in the Cambrian Ordovician aquifer because it has the most consistent permeability (35 gpd/sq ft) and thickness (200 ft) of the aquifers in northeastern Illinois Recharge to the Cambrian-Ordovician aquifer system is mostly from western McHenry, Kane, and Kendall Counties where the rocks crop out at the surface or lie immediately below the glacial drift Additional recharge occurs directly from leakage of precipitation downward through the shallow bedrock system (Hughes, et al , 1966)

The second deep bedrock aquifer system -- the Mt Simon aquifer is bounded above by the relatively impermeable shales and dolomites of the upper and middle parts of the Eau Claire Formation (which act as an aquitard) and below by the crystalline Pre Cambrian basement Although the Mt Simon sandstone is nearly 1 700 feet thick only the uppermost 275 feet yield potable water because below that depth the water is too highly mineralized for most purposes (Hughes et al 1966) The average permeability of the Mt Simon aquifer system is approximately 16 gpd/sq ft (Hughes, et al , 1966) and recharge is largely from the outcrop region of Cambrian rocks in central southern Wisconsin (Willman, 1971)

The Village of Lake Bluff receives its water from Lake Michigan at the Central Lake County Joint Action Water Agency located at 700 Blodgett Avenue in Lake Bluff, Illinois The raw intake is located 0 25 mile into Lake Michigan Private water wells exist in the Village of Lake Bluff their locations and directions are 2 Eva Terrace, residential well located 0 5 mile west of the facility an industrial well for watering plants for Mariana Landscaping, 300 Rockland Road, located 0 7 mile west of the facility, 311 Signe Court located 1 mile north of the facility, Blodgett Avenue located 1 5 miles northeast of the facility, an unincorporated area on Forestview Drive located 1 mile northwest of the facility, and approximately 100 wells on Arden Shore Drive, located 2 miles north of the facility The wells are all screened in glacial drift (Village of Lake Bluff 1992) Ground water flows east toward Lake Michigan, the ground water wells discussed above are located upgradient from the facility

2 7 RECEPTORS

The facility occupies 8 acres in a mixed use industrial and commercial area in Lake Bluff Illinois Lake Bluff has a population of about 3,400 people (Rand McNally and Company 1991)

The facility is bordered on the north by businesses on the west by Skokie Highway on the south by a field, pond and Skokie Highway, and on the east by railroad tracks The nearest residential area is located about 0 6 mile northwest of the facility The nearest school Forest Bluff Elementary School is located 1 mile west of the facility (Figure 1 based on a 1980 USGS topographic map, shows Our Lady of the Forest School closest to the Johnson facility However, according to representatives from the village of Lake Bluff, this school is now closed) The facility has locked entrances and all visitors are required to check in at the south entrance Eight foot high fencing protects the outdoor storage area

The nearest surface water body, an unnamed pond, is located on the 20 acre portion of land formerly owned by Fansteel, about 900 feet south of the facility, and is used for water drainage purposes Other surface water bodies in the area include Lake Michigan located 2 miles east of the facility The north branch of the Chicago River is located 1 2 miles southwest of the facility

Ground water is used as an industrial and drinking water source The nearest private residential drinking water well is located at 2 Eva Terrace, 0 5 mile west of the facility The nearest industrial water well is located at 300 Rockland Road 0 7 mile west of the facility Both of these wells are located upgradient from the facility

Sensitive environments are located south of the facility on the 20-acre portion of land formerly owned by Fansteel The nearest sensitive environment is an unnamed pond The pond is a wetland, classified as palustrine open water, intermittently exposed, and excavated The pond is located 900 feet south of the facility

Other sensitive environments located within a 2 mile radius of the facility are a palustrine emergent seasonally flooded wetland located 0 25 mile to the west, a palustrine, forested broad leaved deciduous, temporarily flooded wetland located 0 75 mile to the north, and palustrine, emergent seasonally flooded wetlands located 0 75 mile to the south (USDI, 1981) Based on maps no other sensitive environments were found

3 0 SOLID WASTE MANAGEMENT UNITS

This section describes the three SWMUs identified during the PA/VSI The following information is presented for each SWMU description of the unit, dates of operation wastes managed release controls, history of documented releases, and RAI s observations Figure 2 shows the SWMU locations

SWMU 1	Former Acetone Storage Area
Unit Description	The Former Acetone Storage Area was located indoors in the northeast corner of the facility The unit measured 15 feet by 15 feet with an 8 inch-thick concrete floor and a permitted capacity of 5 500 gallons No floor drains were present in this area of the building Spent acetone (D001 F003) was managed in 55 gallon steel drums (see Photographs No 1 and 2)
Date of Startup	This unit began operation 1974
Date of Closure	This unit was RCRA closed in 1986 with IEPA approval and is no longer used for waste management activities
Wastes Managed	Fansteel used this unit to manage spent acetone (D001 F003) in 55 gallon steel drums Hydrite Chemical Company of Milwaukee Wisconsin, disposed of this waste
Release Controls	The unit was located indoors, on an 8-inch thick concrete floor No floor drains were present in the area
History of Documented Releases	No known releases from this unit have been documented

Observations	The former location of SWMU 1 contained empty drums and a work bench during the VSI No cracks were observed in the concrete floor and RAI noted no evidence of release
SWMU 2	**Former Acetone AST**
Unit Description	The Former Acetone AST was located in the northwest corner of the facility on 8-inch thick concrete The unit was a 700 gallon steel AST that was part of a solvent distillation system Fansteel stopped using the distillation system and stored spent acetone (D001 F003) in the AST No floor drains were present in this area of the building (see Photographs No 3 and 4)
Date of Startup	This unit began operation prior to 1982
Date of Closure	The 700-gallon AST was RCRA closed and removed in 1986
Wastes Managed	This unit stored spent acetone (D001, F003) in a 700 gallon AST Hydrite Chemical Company of Milwaukee, Wisconsin disposed of this waste
Release Controls	The unit was located indoors, on an 8-inch thick concrete floor No floor drains were present in the area
History of Documented Releases	No known releases from this unit have been documented
Observations	Unfinished steel doors were being stored in the former location of SWMU 2 during the VSI No cracks were observed in the concrete floor and RAI noted no evidence of release

SWMU 3	Outdoor Storage Area
Unit Description	The Outdoor Storage Area is located on the east side of the facility The unit measures 16 feet by 20 feet and consists of a 4 inch thick concrete pad A 6-foot high fence topped with barbed wire encloses a portion of the unit that stores empty drums The west side of the area, outside of the fence, is where the waste paint (D001) and paint booth filters (D001) are managed (see Photograph No 5) The nearest storm water drain is located 200 feet north of the unit
Date of Startup	This unit began operation in 1987
Date of Closure	This unit is active today
Wastes Managed	This unit manages waste paint (D001) and paint booth filters (D001) in 55-gallon drums for less than 180 days Scout Transportation Company of Tulsa Oklahoma transports this waste to Chief Supply Corporation of Hoskell Oklahoma for treatment
Release Controls	The unit has no release controls
History of Documented Releases	No known releases from this unit have been documented
Observations	The unit contained 17 55-gallon drums of waste paint (D001) and paint booth filters (D001) during the VSI All drums were closed and staining was not present RAI noted no evidence of release No cracks were visible in the concrete pad However drums were managed outside of the fenced area and one full drum was stored on its side rather than in an upright position

4 0 AREAS OF CONCERN

RAI identified one AOC during the PA/VSI This AOC is discussed below its location is shown in Figure 2

AOC 1 UST

The UST is located on the east side of the facility south of SWMU 3 Vent piping was still present and the Johnson facility representative stated the UST has been there since Johnson bought the facility in 1987 The age, capacity materials stored and construction of the UST is unknown The area of the UST is approximately 40 feet by 20 feet (see Photographs No 6 and 7) Facility representatives of Fansteel had no information concerning the UST (Fansteel 1992)

5 0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified three SWMUs and one AOC at the Johnson facility Background information on the facility s location operations, waste generation and management history of documented releases, regulatory history, environmental setting, and receptors is presented in Section 2 0 SWMU-specific information, such as the unit s description dates of operation wastes managed, release controls history of documented releases, and observed condition is presented in Section 3 0 The AOC is discussed in Section 4 0 Following are RAI s conclusions and recommendations for each SWMU and AOC Table 3 at the end of this section summarizes the SWMUs and AOC at the facility and the recommended further actions

SWMU 1 **Former Acetone Storage Area**

Conclusions The Former Acetone Storage Area managed spent acetone (D001 F003) in closed 55 gallon steel drums The unit was RCRA closed with IEPA approval and has been inactive since 1986 The unit was located indoors, on an 8 inch thick concrete floor No floor drains were present in the area of the unit

The potential for release to all environmental media is low No known releases have been documented from this unit The location of former SWMU 1 contained empty drums and a work bench, and is no longer used for waste management activities

Recommendations RAI recommends no further action for this unit at this time

SWMU 2 **Former Acetone AST**

Conclusions The Former Acetone AST was located indoors and consisted of a 700-gallon steel AST The unit was part of a distillation sytem used to reclaim spent acetone and was later used to store spent acetone (D001, F003) The unit was RCRA closed and removed in 1986 No

ENFORCEMENT
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releases have been documented from this unit Currently unfinished steel doors are being stored in the area

The unit was located indoors on an 8-inch-thick concrete floor No floor drains were present in the area of the unit The potential for release to all environmental media is low

Recommendations

RAI recommends no further action for this unit at this time

SWMU 3

Outdoor Storage Area

Conclusions

The Outdoor Storage Area is located on the east side of the facility The unit measures 16 feet by 20 feet and has a 4 inch thick concrete pad The unit manages waste paint (D001) and paint booth filters (D001) in 55-gallon steel drums A storm water drain is located 200 feet north of the unit

The potential for release to ground water and surface water is low The nearest storm water drain is located 200 feet north of the unit and discharges to the Skokie Drainage Ditch which discharges to the north branch of the Chicago River

Drums are managed outside the fenced area of SWMU 3 on a 4 inch thick concrete pad The potential for release to on site soils is moderate There are no release controls except for the concrete pad to prevent a release from affecting on site soils The release potential to air is low Drums are stored closed

Recommendations

RAI recommends the drums of waste paint (D001) and paint booth filters (D001) be managed within the fenced area of SWMU 3 RAI also recommends constructing a berm to contain releases from drums

AOC 1 UST

Conclusions

The UST is located on the east side of the facility south of SWMU 3 Vent piping from the UST was observed during the VSI Fansteel and Johnson representatives did not know the age construction material stored or capacity of the UST The area of the UST is approximately 40 feet by 20 feet

The potential for release to ground water and on site soils is moderate Fansteel and Johnson representatives have been unable to determine what material was stored in the UST A leak in the UST could impact ground water and on-site soils The potential for release to air and surface water is low since the unit is below grade

Recommendations

RAI recommends confirming the presence of the UST sampling contents if the UST contains any material conducting a tightness test on the UST, and then depending upon the results of the tightness test possibly following up with soil sampling RAI also reccomends removal and closure of the UST

TABLE 3

SWMU AND AOC SUMMARY

	SWMU	Dates of Operation	Evidence of Release	Recommended Further Action
1	Former Acetone Storage Area	1974 to 1986	None	No further action at this time
2	Former Acetone AST	Prior to 1982 to 1986	None	No further action at this time
3	Outdoor Storage Area	1987 to Present	None	RAI recommends the waste paint (D001) drums be managed in the fenced area of SWMU 3 and constructing a berm

	AOC	Dates of Operation	Evidence of Release	Recommended Further Action
1	UST	Unknown	None	RAI recommends confirming the presence of the UST sampling contents if the UST contains any material conducting a tightness test and then, depending on the results of the tightness test possibly following up with soil sampling RAI also recommends removal and closure of the UST

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Hughes G M , P Kraatz, and R A Landon 1966 Bedrock Aquifers of Northeastern Illinois Illinois State Geological Survey Circular 406, Urbana, Illinois

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Village of Lake Bluff, 1992 Conversation with George Ruffle Village of Lake Bluff Water Department and Laura Czajkowski, Resource Applications, Inc concerning private ground water wells, October 26

Willman, H B 1971 Summary of the Geology of the Chicago Area Illinois State Geological Survey Circular 460, Urbana, Illinois

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ATTACHMENT A

EPA PRELIMINARY ASSESSMENT FORM 2070 12

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 SITE INFORMATION AND ASSESSMENT

I IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD 010 224 335

II SITE NAME AND LOCATION

01 SITE NAME (Legal common or descriptive name of site)	02 STREET ROUTE NO OR SPECIFIC LOCATION IDENTIFIER				
Johnson Fire Proof Door Co Inc	415 Skokie Highway				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Lake Bluff	IL	60044	Lake		
09 COORDINATES LATITUDE	**LONGITUDE**				
42 15 36 N	087 52 30 W				

10 DIRECTIONS TO SITE *(Starting from nearest public road)*

From Chicago take Lake Shore Drive North to Route 41 North Continue on Route 41 to Route 176 exit facility on corner

III RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing residential)		
Norman Johnson	415 Skokie Highway		
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 TELEPHONE NUMBER**
Lake Bluff	IL	60044	(708) 295 3800
07 OPERATOR (If known and different from owner)	**08 STREET** (Business, mailing residential)		
09 CITY	**10 STATE**	**11 ZIP CODE**	**12 TELEPHONE NUMBER**

13 TYPE OF OWNERSHIP *(Check one)*

☒ A PRIVATE ☐ B FEDERAL _____ (Agency name) ☐ C STATE ☐ D COUNTY ☐ E MUNICIPAL

☐ F OTHER _____ (Specify) ☐ G UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE *(Check all that apply)*

☒ A RCRA 3010 DATE RECEIVED 12 / 05 / 81 (MONTH DAY YEAR) ☐ B UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED / / (MONTH DAY YEAR) ☐ C NONE

IV CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☒ YES DATE 10 / 22 / 92 ☐ NO

BY *(Check all that apply)*

☐ A EPA ☒ B EPA CONTRACTOR ☐ C STATE ☐ D OTHER CONTRACTOR

☐ E LOCAL HEALTH OFFICIAL ☐ F OTHER _____ (Specify)

CONTRACTOR NAME(S) Resource Applications, Inc

02 SITE STATUS *(Check one)*

☒ A ACTIVE ☐ B INACTIVE ☐ C UNKNOWN

03 YEARS OF OPERATION

1987 (BEGINNING YEAR) / Present (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT KNOWN OR ALLEGED

Johnson Fire Proof Door Co Inc currently generates waste paint (D001) and paint booth filters (D001) In the past Fansteel Inc generated spent acetone (D001 F003)

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

An Underground Storage Tank (AOC 1) is believed to be located on the east side of the facility Facility representatives of the former owner Fansteel Inc have no information concerning the Underground Storage Tank

V PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION *(Check one. If high or medium is checked complete Part 2 Waste Information and Part 3 Description of Hazardous Conditions and Incidents)*

☐ A HIGH *(Inspection required promptly)* ☐ B MEDIUM *(Inspection required)* ☒ C LOW *(Inspect on time-available basis)* ☐ D NONE *(No further action needed complete current disposition form)*

VI INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)			03 TELEPHONE NUMBER
Kevin Pierard	EPA Region V			(312) 886 4448
04 PERSON RESPONSIBLE FOR ASSESSMENT	**05 AGENCY**	**06 ORGANIZATION**	**07 TELEPHONE NUMBER**	**08 DATE**
Leu s Czajkowski		Resource Applications Inc	(312) 332 2230	10 / 22 / 93 (MONTH DAY YEAR)

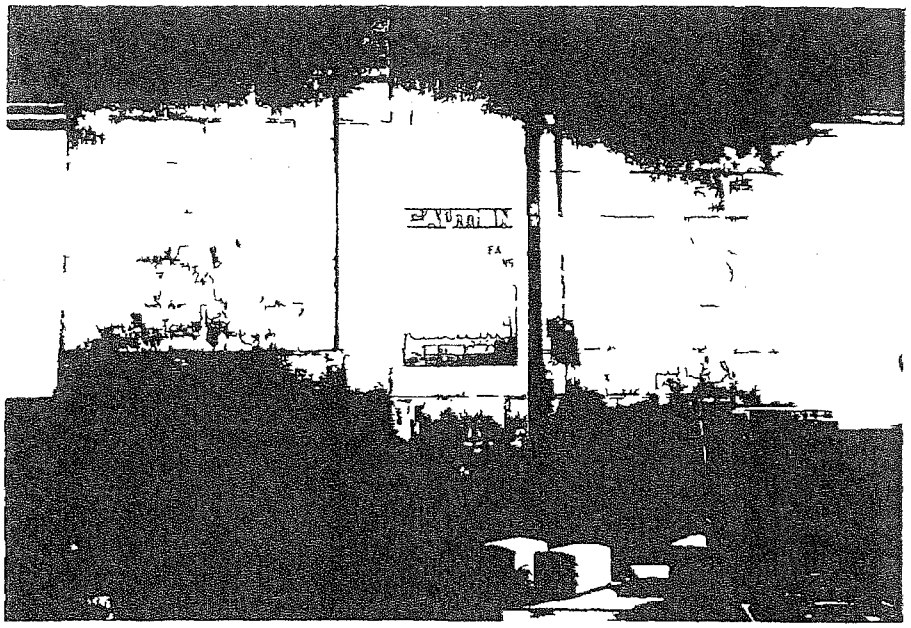
ATTACHMENT B

VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

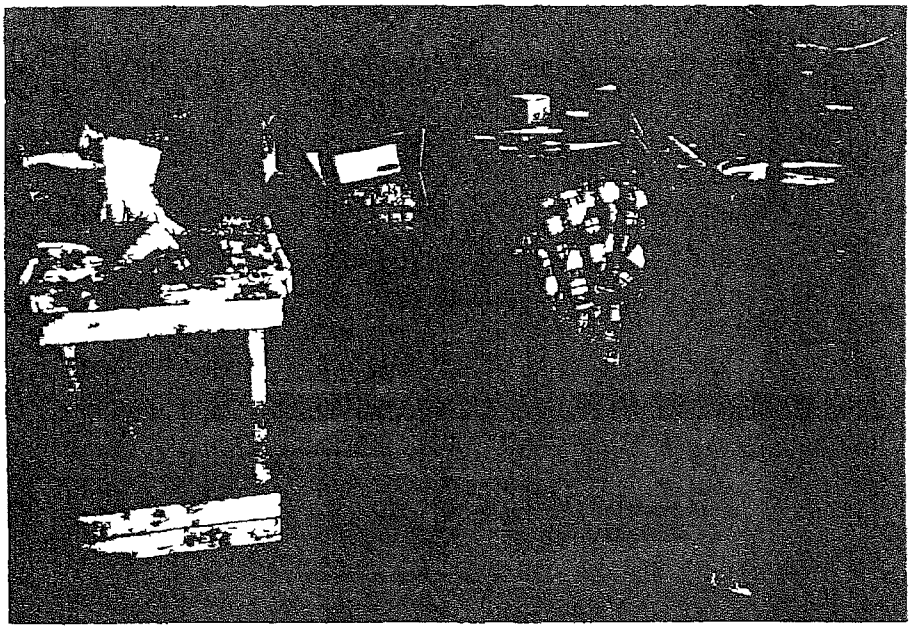
VISUAL SITE INSPECTION SUMMARY

Johnson Fire Proof Door Co Inc
415 Skokie Highway
Lake Bluff, IL 60044
ILD 010 224 335

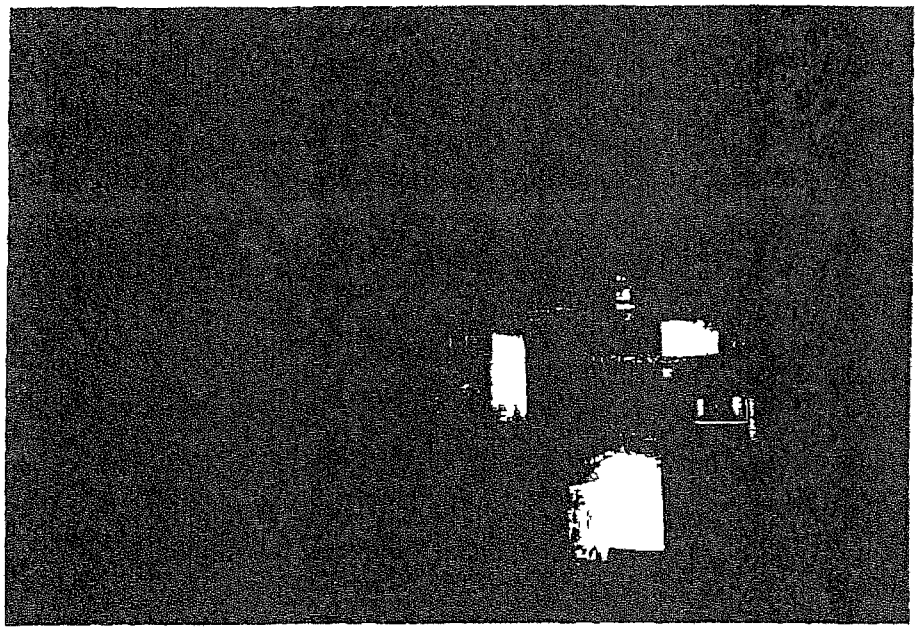
Date	October 22 1992
Primary Facility Representative Representative Telephone No	Dave Schmit Plant Manager (708) 295 3800
Inspection Team	Laura Czajkowski Resource Applications Inc (RAI) William Earle, RAI
Photographer	Laura Czajkowski RAI
Weather Conditions	Sunny temperature about 62°F
Summary of Activities	The visual site inspection (VSI) began at 9 45 a m with an introductory meeting The inspection team explained the purpose of the VSI and the agenda for the visit The facility representative then discussed the facility s past and current operations, solid wastes generated and release history The facility representative provided the inspection team with copies of requested documents The VSI tour began at 11 05 a m The first area toured was outdoors at the UST (AOC 1) Vent piping from the UST was observed The Outdoor Storage Area (SWMU 3) was viewed next Seventeen drums were stored closed The tour was then conducted indoors and the Former Acetone AST (SWMU 2) was viewed Unfinished security doors were stored in the area The Former Acetone Storage Area (SWMU 1) was viewed next Empty drums and a work bench were observed in the area The tour concluded at 11 45 a m after which the inspection team held an exit meeting with facility representatives The VSI was completed and the inspection team left the facility at 12 30 p m



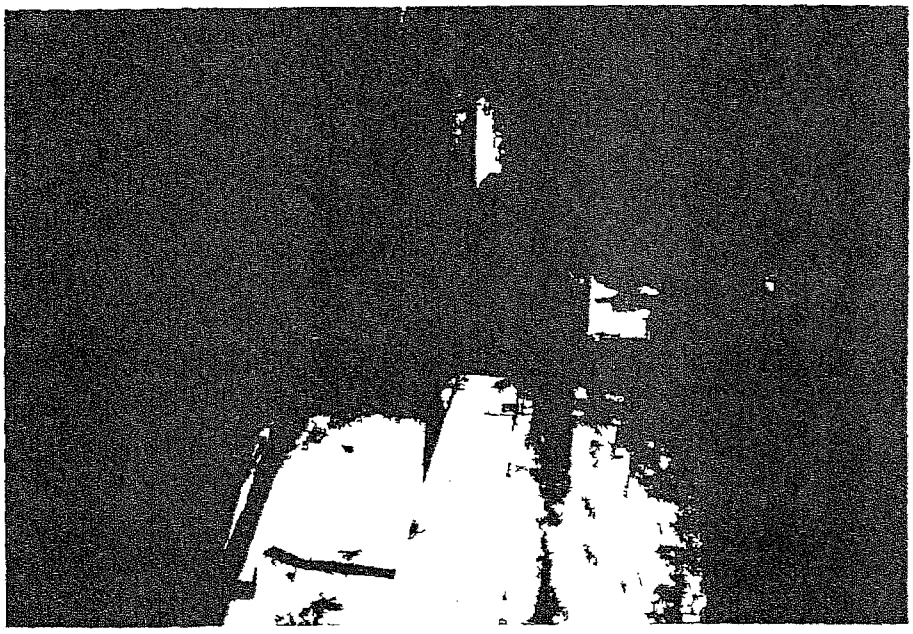
Photograph No 1 Location SWMU 1
Orientation East Date 10/22/92
Description The Former Acetone Storage Area (SWMU 1) was located in this area



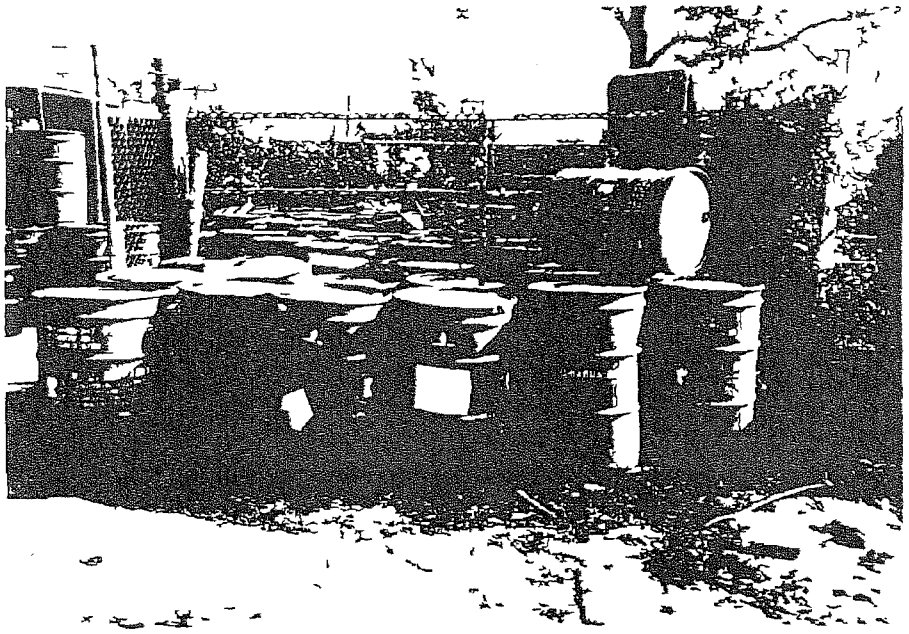
Photograph No 2 Location SWMU 1
Orientation East Date 10/22/92
Description This is a photograph of SWMU 1 Currently a work bench and empty drums are stored here



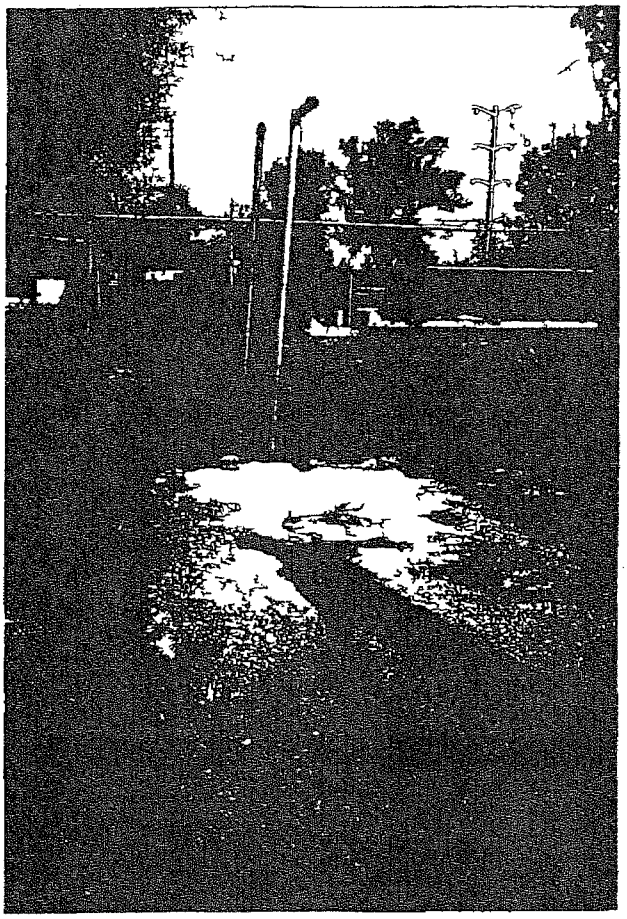
Photograph No 3 Location SWMU 2
Orientation East Date 10/22/92
Description The area on the left hand side of the photograph is where the Former Acetone AST (SWMU 2) was located Unfinished security doors are currently stored here



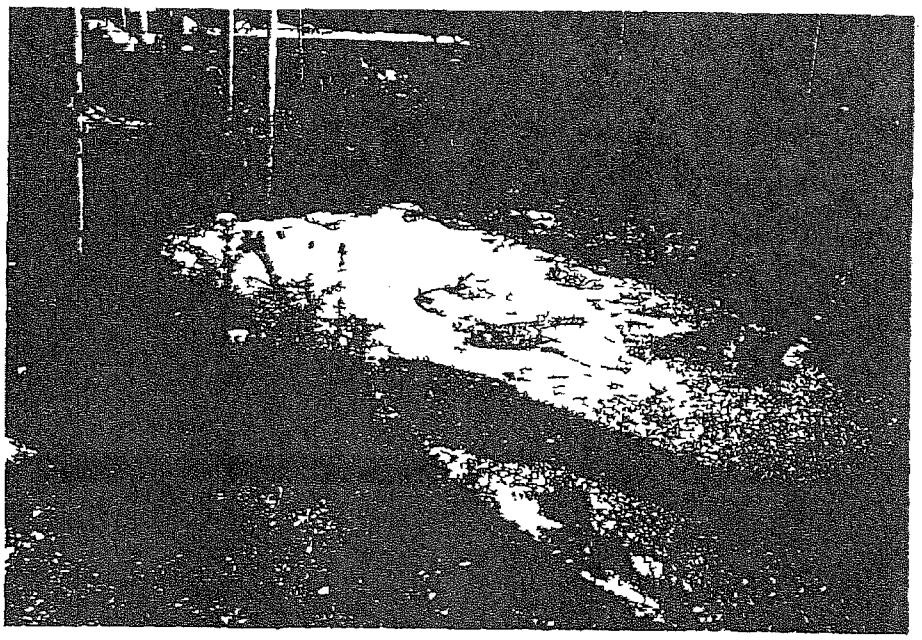
Photograph No 4 Location SWMU 2
Orientation East Date 10/22/92
Description This is another view of SWMU 2 Unfinished security doors are stored here



Photograph No 5 Location SWMU 3
Orientation East Date 10/22/92
Description The 17 drums in the foreground of the picture managed waste paint (D001) The drums in the fenced area are empty This is the Outdoor Storage Area (SWMU 3)



Photograph No 6 Location AOC 1
Orientation North Date 10/22/92
Description This is a photograph of the area above the UST (AOC 1) Vent piping is still present in the background of the photograph



Photograph No 7
Orientation North
Description This is a closeup of the area of the UST (AOC 1)

Location AOC 1
Date 10/22/92

ATTACHMENT C

VISUAL SITE INSPECTION FIELD NOTES

Johnson Fire Proof Door Co, Inc 10/22/92
9 45 am Formerly Fansteel
South 10mph, 62°F, sunny
N - businesses
E - railroad 2-shifts
S - Field, pond, Skokie Highway (rt 41)
W - Skokie highway
No releases, No injuries w/paint., NO USTs
MSDS for paint they use on their doors

DOO5 waste paint sent out as - No, manifest lists
wastes as D001
Cut sheet metal, solder, stamp one side, turn it
over, stamp the other side, paint on one side

employees - 110

1 North 40 x 20
maybe UST

2 North
UST

3 East
17 drums - waste paint - concrete, NO cracks, NO staining

4 East 16 x 20
Empty drums in Fenced Yard TC 10/22/92

8

Johnson Fire Proof Door Co, Inc

5 North — Northeast Corner Stormwater drain

Steel scrap dumpster

10 cubic yard

Trampita — North stormwater drain

Itasca, IL

6 Inboard

East

Former AST / distillation Unit

7 East

Former AST

8 East

Hazardous Waste Storage Area (FORMER)

8-inch-thick concrete floor

9 East

Hazardous Waste Storage Area (FORMER)

NO cracks

NO Drains

10 Southwest paint booth

replace filters 1 every 2 weeks

1/2 drum every week + 1/2

11 Southwest paint booth

JC 10/22

Johnson Fire Proof Door Co, Inc

Used Detrix - Want someone else

Scout Transportation Company

to Chief Supply Corp

Haskell, OK

Detrix out of Birmingham, Michigan

parking lot south side of facility

12 South

pond located on site

stormwater drain empties into pond on north end

ducks in water

west side of parking lot water runoff to stormwater pipe that leads to pond

13 West side of the facility

North parking lot for limosines

tour concluded 11 45 am

12 30pm left the facility

10/22/92

10/22/92